

RAW SEQUENCE LISTING  
PATENT APPLICATION US/08/699,7164

DATE: 02/19/97

TIME: 16:15:59

INPUT SET: S15620.raw

This Raw Listing contains the General  
Information Section and up to the first 5 pages.

## SEQUENCE LISTING

ENTERED

1  
2  
3 (1) General Information:  
4 (i) APPLICANT: David G. Heath  
5 Arthur M. Friedlander  
6 George W. Anderson  
7 Susan L. Welkos  
8  
9 (ii) TITLE OF INVENTION: Recombinant F1-V Plague Vaccine  
10  
11 (iii) NUMBER OF SEQUENCES: 6  
12  
13 (iv) CORRESPONDENCE ADDRESS:  
14 (A) ADDRESSEE: John Moran  
15 (B) STREET: USA MPMC - MPMC-JA  
16 (C) CITY: FORT DETRICK, FREDERICK  
17 (D) STATE: MARYLAND  
18 (E) COUNTRY: USA  
19 (F) ZIP: 21702-5012  
20  
21 (v) COMPUTER READABLE FORM:  
22 (A) MEDIUM TYPE: Floppy disk  
23 (B) COMPUTER: Apple Macintosh  
24 (C) OPERATING SYSTEM: Macintosh 7.5  
25 (D) SOFTWARE: Microsoft Word 6.0  
26  
27 (vi) CURRENT APPLICATION DATA:  
28 (A) APPLICATION NUMBER:  
29 (B) FILING DATE:  
30 (C) CLASSIFICATION:  
31  
32 (vii) PRIOR APPLICATION DATA:  
33 (A) APPLICATION NUMBER:  
34 (B) FILING DATE:  
35  
36 (viii) ATTORNEY/AGENT INFORMATION:  
37 (A) NAME: Moran, John  
38 (B) REGISTRATION NUMBER: 26,313  
39 (C) REFERENCE/DOCKET NUMBER:  
40  
41 (ix) TELECOMMUNICATION INFORMATION  
42 (A) TELEPHONE: (301) 619-2065  
43 (B) TELEFAX: (301) 619-7714  
44  
45 (2) INFORMATION FOR SEQ ID NO:1:  
46

RAW SEQUENCE LISTING  
PATENT APPLICATION US/08/699,716ADATE: 02/19/97  
TIME: 16:16:02

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47 (i) SEQUENCE CHARACTERISTICS:

48 (A) LENGTH: 1566 bp

49 (B) TYPE: Nucleic acid

50 (C) STRANDEDNESS: Single

51 (D) TOPOLOGY: Linear

52

53 (ii) SEQUENCE DESCRIPTION: SEQ ID NO:1:

54

55 ATGGGCCATC ATCATCATCA TCATCATCAT CATCACAGCA 40

56

57 GCGGCCATAT CGACGACGAC GACAAGCATA TGAAAAAAAT 80

58

59 CAGTTCCGTT ATCGCCATTG CATTATTTGG AACTATTGCA 120

60

61 ACTGCTAATG CGGCAGATTT AACTGCAAGC ACCACTGCAA 160

62

63 CGGCAACTCT TGTTGAACCA GCGCGCATCA CTCTTACATA 200

64

65 TAAGGAAGGC GCTCCAATTA CAATTATGGA CAATGGAAAC 240

66

67 ATCGATACAG AATTACTTGT TGGTACGCTT ACTCTTGGCG 280

68

69 GCTATAAAAC AGGAACCACT AGCACATCTG TTAACCTTAC 320

70

71 AGATGCCGCG GGTGATCCCA TGTACTTAAC ATTTACTTCT 360

72

73 CAGGATGGAA ATAACCACCA ATTCACTACA AAAGTGATTG 400

74

75 GCAAGGATTC TAGAGATTTT GATATCTCTC CTAAGGTAAA 440

76

77 CGGTGAGAAC CTTGTGGGGG ATGACGTCGT CTTGGCTACG 480

78

79 GGCAGCCAGG ATTTCTTTGT TCGCTCAATT GGTTCCAAAG 520

80

81 GCGGTAAACT TGCAGCAGGT AAATACACTG ATGCTGTAAC 560

82

83 CGTAACCGTA TCTAACCAAG AATTCATGAT TAGAGCCTAC 600

84

85 GAACAAAACC CACAACATTT TATTGAGGAT CTAGAAAAAG 640

86

87 TTAGGGTGGA ACAACTTACT GGTCATGGTT CTTCAGTTTT 680

88

89 AGAAGAATTG GTTCAGTTAG TCAAAGATAA AAATATAGAT 720

90

91 ATTTCCATTA AATATGATCC CAGAAAAGAT TCGGAGGTTT 760

92

93 TTGCCAATAG AGTAATTACT GATGATATCG AATTGCTCAA 800

94

95 GAAAATCCTA GCTTATTTTC TACCCGAGGA TACCATTCTT 840

96

97 AAAGGCGGTC ATTATGACAA CCAACTGCAA AATGGCATCA 880

98

99 AGCGAGTAAA AGAGTTCCTT GAATCATCGC CGAATACACA 920

# RAW SEQUENCE LISTING PATENT APPLICATION US/08/699,716A

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100					
101	ATGGGAATTG	CGGGCGTTCA	TGGCAGTAAT	GCATTTCTCT	960
102					
103	TTAACCGCCG	ATCGTATCGA	TGATGATATT	TTGAAAGTGA	1000
104					
105	TTGTTGATTC	AATGAATCAT	CATGGTGATG	CCCGTAGCAA	1040
106					
107	GTTGCGTGAA	GAATTAGCTG	AGCTTACCGC	CGAATTAAAG	1080
108					
109	ATTTATTTCAG	TTATTCAAGC	CGAAATTAAT	AAGCATCTGT	1120
110					
111	CTAGTAGTGG	CACCATAAAT	ATCCATGATA	AATCCATTAA	1160
112					
113	TCTCATGGAT	AAAAATTTAT	ATGGTTATAC	AGATGAAGAG	1200
114					
115	ATTTTTAAAG	CCAGCGCAGA	GTACAAAATT	CTCGAGAAAA	1240
116					
117	TGCCCTCAAAC	CACCATTTCAG	GTGGATGGGA	GCGAGAAAAA	1280
118					
119	AATAGTCTCG	ATAAAGGACT	TTCTTGGAAG	TGAGAATAAA	1320
120					
121	AGAACCGGGG	CGTTGGGTAA	TCTGAAAAAC	TCATACTCTT	1360
122					
123	ATAATAAAGA	TAATAATGAA	TTATCTCACT	TTGCCACCAC	1400
124					
125	CTGCTCGGAT	AAGTCCAGGC	CGCTCAACGA	CTTGGTTAGC	1440
126					
127	CAAAAAACAA	CTCAGCTGTC	TGATATTACA	TCACGTTTTA	1480
128					
129	ATTCAGCTAT	TGAAGCACTG	AACCGTTTCA	TTCAGAAATA	1520
130					
131	TGATTTCAGTG	ATGCAACGTC	TGCTAGATGA	CACGTCTGGT	1560
132					
133	AAATGA				1566
134					
135					

## (2) INFORMATION FOR SEQ ID NO:2:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 521

(B) TYPE: Amino acid

(C) STRANDEDNESS: Single

(D) TOPOLOGY: Linear

## (ii) SEQUENCE DESCRIPTION: SEQ ID NO:2:

146	Met	Gly	His	His	His	His	His	His	His	His	His	Ser	Ser	Gly	
147	1				5					10				15	
148															
149	His	Ile	Asp	Asp	Asp	Asp	Lys	His	Met	Lys	Lys	Ile	Ser	Ser	Val
150					20					25				30	
151															
152	Ile	Ala	Ile	Ala	Leu	Phe	Gly	Thr	Ile	Ala	Thr	Ala	Asn	Ala	Ala

## RAW SEQUENCE LISTING

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	35	40	45
153			
154			
155	Asp Leu Thr Ala Ser Thr Thr Ala Thr	Ala Thr Leu Val Glu Pro	
156	50	55	60
157			
158	Ala Arg Ile Thr Leu Thr Tyr Lys Glu Gly	Ala Pro Ile Thr Ile	
159	65	70	75
160			
161	Met Asp Asn Gly Asn Ile Asp Thr Glu	Leu Leu Val Gly Thr Leu	
162	80	85	90
163			
164	Thr Leu Gly Gly Tyr Lys Thr Gly Thr	Thr Ser Thr Ser Val Asn	
165	95	100	105
166			
167	Phe Thr Asp Ala Ala Gly Asp Pro Met Tyr	Leu Thr Phe Thr Ser	
168	110	115	120
169			
170	Gln Asp Gly Asn Asn His Gln Phe Thr	Thr Lys Val Ile Gly Lys	
171	125	130	135
172			
173	Asp Ser Arg Asp Phe Asp Ile Ser Pro	Lys Val Asn Gly Glu Asn	
174	140	145	150
175			
176	Leu Val Gly Asp Asp Val Val Leu Ala	Thr Gly Ser Gln Asp Phe	
177	155	160	165
178			
179	Phe Val Arg Ser Ile Gly Ser Lys Gly	Gly Lys Leu Ala Ala Gly	
180	170	175	180
181			
182	Lys Tyr Thr Asp Ala Val Thr Val Thr	Val Ser Asn Gln Glu Phe	
183	185	190	195
184			
185	Met Ile Arg Ala Tyr Glu Gln Asn Pro	Gln His Phe Ile Glu Asp	
186	200	205	210
187			
188	Leu Glu Lys Val Arg Val Glu Gln Leu	Thr Gly His Gly Ser Ser	
189	215	220	225
190			
191	Val Leu Glu Glu Leu Val Gln Leu Val	Lys Asp Lys Asn Ile Asp	
192	230	235	240
193			
194	Ile Ser Ile Lys Tyr Asp Pro Arg Lys	Asp Ser Glu Val Phe Ala	
195	245	250	255
196			
197	Asn Arg Val Ile Thr Asp Asp Ile Glu	Leu Leu Lys Lys Ile Leu	
198	260	265	270
199			
200	Ala Tyr Phe Leu Pro Glu Asp Thr Ile	Leu Lys Gly Gly His Tyr	
201	275	280	285
202			
203	Asp Asn Gln Leu Gln Asn Gly Ile Lys	Arg Val Lys Glu Phe Leu	
204	290	295	300
205			

# RAW SEQUENCE LISTING PATENT APPLICATION US/08/699,716A

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206	Glu Ser Ser Pro Asn Thr Gln Trp Glu Leu Arg Ala Phe Met Ala	
207		305 310 315
208		
209	Val Met His Phe Ser Leu Thr Ala Asp Arg Ile Asp Asp Asp Ile	
210		320 325 330
211		
212	Leu Lys Val Ile Val Asp Ser Met Asn His His Gly Asp Ala Arg	
213		335 340 345
214		
215	Ser Lys Leu Arg Glu Glu Leu Ala Glu Leu Thr Ala Glu Leu Lys	
216		350 355 360
217		
218	Ile Tyr Ser Val Ile Gln Ala Glu Ile Asn Lys His Leu Ser Ser	
219		365 370 375
220		
221	Ser Gly Thr Ile Asn Ile His Asp Lys Ser Ile Asn Leu Met Asp	
222		380 385 390
223		
224	Lys Asn Leu Tyr Gly Tyr Thr Asp Glu Glu Ile Phe Lys Ala Ser	
225		395 400 405
226		
227	Ala Glu Tyr Lys Ile Leu Glu Lys Met Pro Gln Thr Thr Ile Gln	
228		410 415 420
229		
230	Val Asp Gly Ser Glu Lys Lys Ile Val Ser Ile Lys Asp Phe Leu	
231		425 430 435
232		
233	Gly Ser Glu Asn Lys Arg Thr Gly Ala Leu Gly Asn Leu Lys Asn	
234		440 445 450
235		
236	Ser Tyr Ser Tyr Asn Lys Asp Asn Asn Glu Leu Ser His Phe Ala	
237		455 460 465
238		
239	Thr Thr Cys Ser Asp Lys Ser Arg Pro Leu Asn Asp Leu Val Ser	
240		470 475 480
241		
242	Gln Lys Thr Thr Gln Leu Ser Asp Ile Thr Ser Arg Phe Asn Ser	
243		485 490 495
244		
245	Ala Ile Glu Ala Leu Asn Arg Phe Ile Gln Lys Tyr Asp Ser Val	
246		500 505 510
247		
248	Met Gln Arg Leu Leu Asp Asp Thr Ser Gly Lys	
249		515 520
250		
251		

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 28 bp

(B) TYPE: Nucleic acid

(C) STRANDEDNESS: Single

(D) TOPOLOGY: Linear

PAGE: 1

**SEQUENCE VERIFICATION REPORT**  
**PATENT APPLICATION: US/08/699,716A**

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***INPUT SET: S15620.raw***

Line

Error

Original Text